GEO-CAPE COMMUNITY WORKSHOP
May 11-13, 2011
National Center for Atmospheric Research, Boulder, CO
http://geo-cape.larc.nasa.gov/events-MAY2011CW.html

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Wednesday May 11 – Plenary Session

8:30 Welcome, GEO-CAPE mission status (Al-Saadi, del Castillo, Topiwala, Friedl)

9:00 GEO-CAPE Science Goals and Requirements - Atmosphere (Daniel Jacob)

9:30 GEO-CAPE Science Goals and Requirements - Ocean (Antonio Mannino)

10:00 Break

10:15 GEO-CAPE Mission Implementation Concept (Richard Key)

11:00 Discussion: Challenges and Opportunities of Distributed Mission Implementation, with focus on overlap, simultaneity, and synergy

11:35 Discussion closure and charge to participants in preparation for tomorrow's breakout sessions (Al Saadi)

11:45 Lunch (working lunch for Mission Design team)

1:00 International plans (Including GEMS, Korean AQ mission / Jhoon Kim; GOCI status and GOCI-II / Yu-Hwan Ahn; European Sentinel-4 and MTG / tbc)

2:00 Report from 1st Workshop on Satellite Observations for Air Quality Management (Jim Szykman, Terry Keating)

2:30 Ocean Application agencies' perspective – (EPA/Blake Schaeffer; NOAA/Cara Wilson)

3:00 Break

3:15 DISCOVER-AQ (Jim Crawford, Ken Pickering)

3:45 Interdisciplinary Science: DISCOVER-AQ and beyond (Jordan, Tzortziou)

4:15 Overview of Relevant Instruments supported through NASA IIP program (Moe)

4:30 Poster session

6:30 Adjourn

Thursday May 12 – Ocean Session

8:30 15-min contributed talks on study results that address geostationary ocean color satellite measurement requirements. Topics will include sensitivity studies, atmospheric correction analysis, scales of temporal and spatial variability, measurement requirements, calibration/validation requirements, instrument design, prototypes, technology, and field campaigns

10:00 Break

10:15 Discussion to hear the requirements of the user communities; discussion on revisions to measurement and instrument requirements based on science & engineering study results

12:00 Lunch (possible Ocean discussion on cal/val needs, future field campaigns)

1:30 Discussion of instrument designs and mission planning considerations with participation of Mission Design team

2:30 Science plans & directions (facilitator: Salisbury; rapporteur?)

3:30 Break

3:45 Recommend priorities for near-term (1-2 year) and mid-term (3-5 year) future work; discussion of Level-1 requirements

Thursday, May 12 –Atmosphere Session

Contributed oral presentations

8:30 A study of regional-scale variability of in situ and model-generated tropospheric trace gases: Insights into observational requirements for a satellite in geostationary orbit (Jack Fishman, St. Louis University)

8:45 Horizontal variability of trace gases over Houston, TX derived from airborne remote sensing, in-situ aircraft measurements and regional chemical models (Ken Pickering, NASA GSFC)

9:00 Spatio-temporal variability of ozone laminae (Mike Newchurch, U. Alabama Huntsville)

9:15 Sequential combination of remote sensing and climatological relationships to produce surface ozone estimates relevant to air quality (Bob Chatfield, NASA Ames)

9:30 High spatial resolution retrievals of NO_2: Insights from OMI (Ron Cohen, UC Berkeley)

9:45 Lessons learned from OMI observations of point source SO_2 pollution (Nick Krotkov, NASA GSFC)

10:00 Break

10:15 Ultraviolet and visible sensitivities and instrument requirements for monitoring tropospheric pollution from geostationary orbit: NO_2, SO_2, HCHO, and CHOCHO (Kelly Chance, Harvard Smithsonian)

10:30 Multi-spectral CO measurements: from MOPITT to GEO-CAPE (David Edwards, NCAR)

10:45 Combining simultaneously measured UV and IR radiances from OMI and TES to improve tropospheric ozone profile retrievals (Dejian Fu, JPL)

11:00 Tropospheric ozone profiling using simulated geostationary measurements (Vijay Natraj, JPL)

11:15 Joint assimilation of ozone and CO geostationary observations to improve constraints on ozone air quality (Peter Zoogman, Harvard)

11:30 The potential of MTG-IRS to detect pollution (Cathy Clerbaux, U. Paris)

11:45 Lunch

1:00 Summary of recent progress in GEO-CAPE aerosol related study (Mian Chin, NASA GSFC)

1:15 The impact of satellite sensor resolution on the aerosol product quality and availability: problems of clouds (Jun Wang, U. Nebraska)

1:30 Aerosol daytime variations over North and South Americas as derived from multiyear AERONET measurements (Yan Zhang, NASA GSFC)

1:45 Diurnal variability of co-located surface $PM_{2.5}$ and column AOT (Qian Tan, NASA GSFC)

2:00 Aerosol retrieval availability for geo-synchronous satellite observations of various spatial scales (Shana Mattoo, NASA GSFC)

2:15 Panchromatic Fourier Transform Spectrometer (PanFTS) for the GEO-CAPE mission (Stan Sander, JPL)

2:30 The Geo-TASO IIP project: an airborne sensor and retrieval project in support of the GEO-CAPE mission (Jim Leitch, Ball Aerospace)

2:45 Break

General discussion of GEO-CAPE atmospheric requirements

3:00 Discussion of instrument designs and mission planning considerations with participation of Mission Design team (Richard Key, lead)

3:45 Priorities for future work (Daniel Jacob, lead)

4:30 Review of STM: baseline and threshold requirements (David Edwards, lead)

5:15 Level-1 requirements (Jay Al-Saadi, lead)

6:00 Adjourn

Friday May 13 – Plenary Session

8:30 Report from A and O sessions: future priorities and mission implementation considerations (Jacob/Edwards, Salisbury)

9:30 Feedback on mission design, esp. overlap and simultaneity of observing issues discussed so far (Key, others?)

10:00 Break

10:15 Synthesis of future priorities into Draft Level 1 Requirements and Roadmap (Al-Saadi, del Castillo, Neil, Ambrose, Key, Iraci)

11:30 Community Endorsement of Near-Term Plans and Draft Roadmap

12:00 Adjourn